

Introduction



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Fly fishing at Black Branch on the Nulhegan River

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This appendix is a companion to chapter 4 of the final comprehensive conservation plan and environmental impact statement (Final CCP/EIS) for the Silvio O. Conte National Fish and Wildlife Refuge (Conte Refuge, refuge). Chapter 4 lists the refuge's watershed-wide goals, objectives, and strategies and describes how we would work with partners throughout the watershed. This appendix takes the watershed-wide goals, objectives, and strategies and steps them down to how we would specifically manage refuge lands over the next 15 years.

Background Information and Definitions

We describe in detail in chapter 4 of the final CCP/EIS the distinction between existing refuge divisions and units, and proposed Conservation Partnership Areas (CPAs) and Conservation Focus Areas (CFAs). Our definition of CPAs and CFAs are a construct specifically tied to this final CCP/EIS only. A summary definition of each term is provided below. Map A.1 shows general locations of where we propose CPAs and CFAs in the watershed. We are proposing that CPAs and CFAs form the geographic framework for implementing strategic habitat conservation under alternatives B, C, and D. Both CPAs and CFAs are proposed in alternatives B, C, and D, although the total number, and/or size of individual areas vary by alternative. This appendix primarily focuses on CFAs included in final CCP/EIS alternative C (the Service-preferred alternative). Most of the management direction described in this appendix also applies to alternative B, except that we propose to acquire less refuge land in fewer CFAs under alternative B. Table A.1 below lists all of the proposed CFAs and how much land we propose to acquire in each under alternative C. For each CFA, we provide maps showing each the proposed CFAs under alternative C.

Conservation Partnership Areas (CPAs): CPAs are primarily based on one or more subwatersheds using 12-digit hydrologic unit codes (HUCs; USGS). We focus on these areas within the watershed because our State and other conservation partners identified an interest in pursuing conservation activities on these lands and requested Service involvement, coupled with our own assessment that the Service could make an important contribution to conserving Federal trust resources in these areas. In areas we propose as CPAs, the Service would actively facilitate and support conservation, environmental education, and recreation actions, in partnership with others across all ownerships, to contribute toward Conte Refuge's legislated purposes (see chapter 1). In CPAs, we are seeking authority to acquire 10% of our target acreage (see CFA discussion below).

Conservation Focus Areas (CFAs): CFAs are areas nested within CPAs. These are areas where the Service proposes to acquire additional refuge lands due to the concentration and high value of resources important to Federal trust resources. Some CFAs encompass existing refuge lands which will serve as an anchor for additional refuge acquisition, and whose current resource values would be further enhanced by additional acquisition. Specifically, CFAs include lands we feel would be best protected, managed, and conserved by the Service. The CFA boundaries define where the Service would seek authority to pursue a refuge expansion and acquire a fee or easement interest from willing sellers in areas that are not otherwise permanently protected. Each CFA has a discreet and defined boundary that is based on meeting specific conservation objectives (defined further in this appendix), with some refinements to accommodate ownership parcel lines where those adjustments do not diminish achieving our objectives. Once land is acquired for the refuge, we will administratively call the CFA a refuge "division." For example, if we acquire land in the proposed Maromas CFA, we would then call those refuge lands the Maromas Division of Conte Refuge.

The land protection proposal included in the final CCP/EIS alternative C represents the Service-preferred number, size, and distribution of CPAs and CFAs. Alternative C would result in a refuge expansion of 99,507 acres and a sum total of 197,337 refuge acres. Approximately, on average, 90% of the acreage acquired would lie within the CFAs; the remaining 10% would occur in CPAs (e.g. area outside of CFAs). Our recommendations for managing these lands is included in this appendix A, while the design, strategy, and priority for acquiring those lands is further detailed in Appendix C, "Land Protection Plan (LPP)." A summary of the criteria and considerations for defining CFAs is presented below.

Conserves Priority Conservation Targets. We worked with the States and conservation organizations to compile known information on Federal trust resource occurrences and associated important habitat areas. In general, each CFA includes a core biological area that is based on the needs of identified priority resources. In each individual CFA description that follows, we identify the priority refuge resources of concern that would guide future management of those lands under Service ownership.

Provides Habitat Connections. We worked with the States and conservation organizations to insure habitat connections for Federal trust species and other respective state species of concern within the existing and planned conservation landscape. Each of the States and several conservation organizations have identified target or focal areas for additional conservation, and we discussed with them ways to complement their efforts. Collectively, we considered habitat connectivity in area (size), elevation, latitude, aspect, and natural processes (e.g., hydrological flow, groundwater recharge, etc.).

Incorporates Adaptation Strategies for Predicted Climate and Land Use Changes. We also considered in our distribution of CFAs how connections to other existing conserved lands would promote representation, redundancy, and overall resiliency within the watershed, allowing us to be better prepared for changes in land use and climate. We considered North Atlantic LCC modeling results depicting indexes of ecological integrity, and results from The Nature Conservancy resiliency mapping. We considered how our contribution to the conserved lands network could also facilitate near and long term desirable outcomes for species migration and emigration under predicted land use and climate changes. For example, the barrier-free segment near the Connecticut River's mouth creates opportunities, over time, for the landward migration of the coastal wetland complex from the Long Island Sound which can be enhanced through the strategic placement of CFAs in this reach of the river.

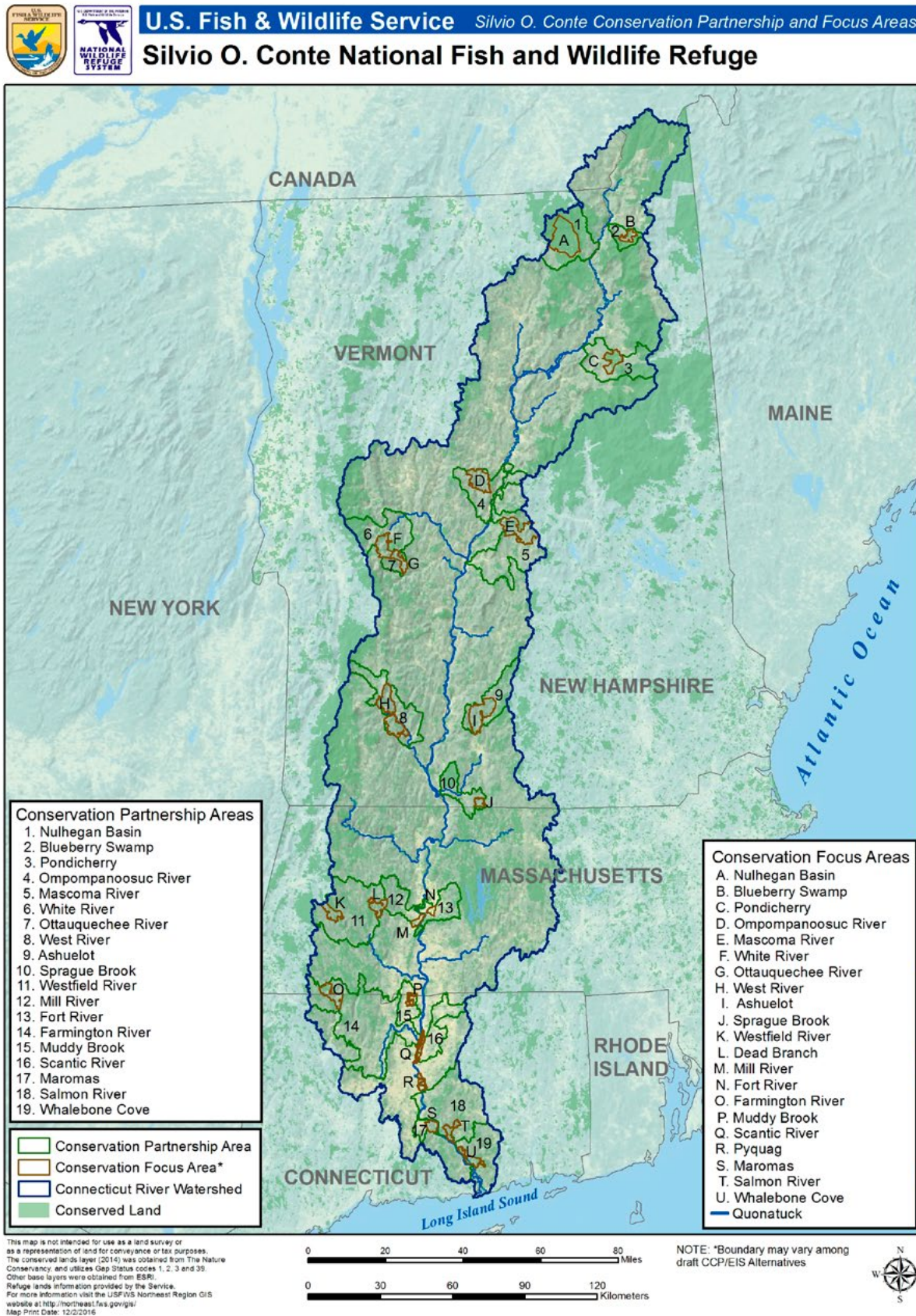
Incorporates Administrative Efficiencies. CFAs are primarily based on the ecological criteria and considerations above; however, the final boundary includes refinements or adjustments to establish a more accessible and operationally efficient "administrative line" that follows prominent features within the landscape that secures public and administrative access, Service visibility, and the cost of land stewardship in perpetuity.

In some instances, the exterior administrative line follows transportation corridors, waterways, or other more recognized and predictable configurations. The administrative line is intended to reduce the impact from adjacent uses, promote access and visibility of refuge lands, and conserve operational funding through reductions in maintenance and administrative costs.

Refuge Divisions: Refuge divisions are an administrative subdivision of an existing refuge; they are not stand-alone, official refuges in themselves, although they may have a large enough land base that separate plans and programs are developed. There are currently nine divisions on Conte Refuge. Lands proposed for acquisition in CFAs would either become incorporated into an existing refuge division or a new refuge division would be created once enough land is acquired.

Refuge Units: Refuge units are discreet parcels of existing refuge lands acquired for a specific purpose. There are currently eight units on Conte Refuge; all are small isolated parcels acquired because they were identified as special focus areas in the 1995 Final EIS establishing the refuge.

Map A.1. Proposed Conservation Partnership Areas and Conservation Focus Areas Under CCP Alternative C



The primary purpose of this appendix is to explain the importance of existing refuge lands (refuge divisions and units) and proposed refuge lands (CFAs) in meeting the goals and objectives we identified in chapter 1, and to detail how we propose to manage these lands into the future under Service-preferred alternative C. The management direction herein also applies to alternative B, although not all CFAs are included and some are smaller in size under that alternative. In our explanation that follows, we focus on how these lands help conserve Federal trust species and other resources of concern and their habitats (goal 1); how conservation education and outreach could be enhanced (goal 2), the potential for providing compatible, public use opportunities (goal 3), and opportunities to further develop and promote meaningful partnerships (goal 4).

Specifically, we describe the resources of interest and concern for each of the 22 CFAs and eight refuge units in the watershed and detail our proposed management objectives and strategies for these areas. After this introduction, we have organized the body of this appendix into four State sections, one for each of the four States in the watershed. Each State section is further subdivided into a presentation on individual refuge divisions, proposed CFAs, or refuge units. The information we provide for each division, proposed CFA, or refuge unit includes:

- An “overview” sheet with highlights of each area.
- A map of the area, including a delineation of existing refuge lands and conservation lands, as appropriate.
- A map of general habitat types within the larger CPA area.
- A table of acres by general habitat type (tables with more detailed habitat information based on the Northeastern Terrestrial Habitat Classification System are available online at: http://www.fws.gov/refuge/Silvio_O_Conte/what_we_do/conservation.html).
- A table of species and habitats of conservation concern for the area, including the priority refuge resources that we propose for refuge management.
- A description of management objectives and strategies we propose under draft CCP/EIS alternative C (Service-preferred alternative). These objectives and strategies are for refuge lands, both existing refuge lands and those that we acquire in the future. This management direction tiers directly to each of the four goals and respective objectives in chapter 3.

We have two exceptions to the organization we describe above. In the Massachusetts section, we also include an overview for the Great Falls Discovery Center which is located in Turners Falls, Massachusetts. The Great Falls Discovery Center is not a CFA or unit, but rather a partnership facility for environmental education and interpretation of the Connecticut River watershed. This overview includes background information, a general locator map, and a description of the management objectives and strategies we propose for the center.

The second exception to our organization is the information we provide on the Quonotuck CFA which spans all four States in the watershed. The Quonotuck CFA includes the lands adjacent to the Connecticut River main stem and major river tributaries, although only 8,000 acres would be acquired in this CFA under Service-preferred alternative C. Because this CFA spans all four states, we present its overview separately at the beginning of the appendix.

Landscape Perspective

Alternative C and its proposal to expand the refuge to a sum total of 197,337 acres would be an important contribution to the conserved lands network in the 7.2 million-acre watershed. Our proposal focuses on protecting core habitats of significance to Federal trust resources and promoting strategic habitat connections with other conserved lands in collaboration with our partners. Additionally, this proposal builds on the 1995 EIS goals to protect federally listed threatened, endangered, and candidate species; rare or exemplary natural communities; important fisheries habitat; important and vulnerable wetlands; and landbird and waterbird breeding and migratory stopover habitat.

The proposed expansion would contribute to a variety of ecoregional landscape plans and partnership initiatives that include the North Atlantic Landscape Conservation Cooperative (LCC), the North American Waterfowl Management Plan, the Atlantic Coast Joint Venture, the Northern Atlantic Regional Shorebird Plan, the Black

Duck Joint Venture Strategic Plan, the Waterbird Conservation Plan for the Mid-Atlantic/New England/Maritimes Region, the Bird Conservation Region (BCR) 14 and 30 Plans, the Connecticut River Watershed Landscape Conservation Design project, and the four States' respective Wildlife Action Plans. More than 200 species identified as a conservation priority in State Wildlife Action plans would benefit from this proposal.

The LPP (appendix C) provides details on how we identified CFAs, the natural resource values in these areas, and why, in our judgment, those lands would be best protected, managed and conserved in Federal fee ownership or under a Federal conservation easement. The LPP also provides more detailed information on our land protection strategies, including the various options for acquiring and protecting lands from willing sellers by the Service within CFAs. For example, the refuge proposes to seek fee title acquisition of approximately 65 percent of the lands it acquires, and acquire interests via conservation easements on approximately 35 percent. However, the actual percentage will depend on individual landowner preferences.

The following table (A.1) lists all the existing refuge divisions and units and proposed CFAs under the Service's preferred alternative C. We also list the acres proposed under alternative B because much of the management direction in this appendix is also applicable under alternative B.

Table A.1. Proposed CFAs under Alternative B and Alternative C (Service-preferred alternative)

State	CFA or Refuge Unit Name	Potential Acres in Service ownership under Alternative B	Potential Acres in Service ownership under Alternative C: Service-preferred Alternative
CT	Maromas	1,939	3,935
CT	Pyquag	3,329	3,329
CT	Muddy Brook	-	2,661
CT	Salmon River*	2,371	4,455
CT	Scantic River	2,140	4,144
CT	Whalebone Cove*	1,770	3,930
CT/MA	Farmington River	5,411	7,661
MA	Dead Branch*	914	5,186
MA	Fort River*	1,495	1,660
MA	Mill River*	1,289	2,300
MA	Westfield River*	3,766	6,177
NH	Ashuelot	7,152	17,860
NH	Blueberry Swamp*	1,996	4,636
NH	Mascoma River*	9,284	20,593
NH	Pondicherry*	6,714	10,249
NH	Sprague Brook	-	3,016
VT	Nulhegan Basin*	27,775	32,779
VT	Ompompanoosuc	4,464	15,072
VT	Ottawaquechee River	-	5,985
VT	West River	9,755	22,947
VT	White River	-	10,054

State	CFA or Refuge Unit Name	Potential Acres in Service ownership under Alternative B	Potential Acres in Service ownership under Alternative C: Service-preferred Alternative
CT/MA/NH/VT	Quonaturck (Connecticut River mainstem and 13 major tributaries)	5,500	8,000
CT	Deadman's Swamp	31	31
CT	Roger Tory Peterson	56	56
MA	Fannie Stebbins	98	98
MA	Hatfield	19	19
MA	Honeypot Road Wetlands	21	21
MA	Mt. Toby	30	30
MA	Mt. Tom	141	141
MA	Third Island	4	4
MA	Wissatinnewag	21	21
NH	Saddle Island	2	2
VT	Putney Mountain	285	285
Total Acres		97,772	197,337

*Proposed CFA includes existing refuge division; either Service fee or easement lands occur within CFA boundary.